

CLAIM AMENDMENTS

1. (Currently Amended) A semiconductor optical waveguide device, comprising:
a semiconductor substrate;
a plurality of substantially S-shaped bent waveguides embedded in the semiconductor substrate;
at least two optical waveguide returning parts ~~which are~~ interposed between a light input end and a light output end of the bent waveguides, each of said optical waveguide returning parts including a multiplexing portion; and
respective light reflecting parts each formed on a rear end side of the multiplexing portion of each of the optical waveguide returning parts, inside the semiconductor substrate.
2. (Original) The semiconductor optical waveguide device according to Claim 1, wherein each of the optical waveguide returning parts comprises a Y-branch.
3. (Currently Amended) The semiconductor optical waveguide device according to Claim 1, wherein each of the optical waveguide returning parts comprises ~~an MMI~~ multi mode interference coupler.
4. (Original) The semiconductor optical waveguide device according to Claim 1, wherein each of the optical waveguide returning parts comprises a directional coupler.
5. (Currently Amended) The semiconductor optical waveguide device according to Claim 1, wherein the optical waveguide returning parts and the light reflecting parts are ~~formed~~ located at a predetermined depth ~~level~~ within the semiconductor substrate.
6. (Currently Amended) The semiconductor optical waveguide device according to Claim 1, wherein each of the bent waveguides includes a core layer and a ~~clad~~ cladding layer, ~~said the core layer being made of an InGaAsP material, said clad and the cladding layer being made of an InP material, wherein the optical waveguide device is applied with an incident light, at a wavelength band of 1.55 μm , is applied to the optical waveguide device and the bent waveguides have a radius of curvature of at least 2400 μm .~~

7. (Currently Amended) The semiconductor optical waveguide device according to Claim 1, ~~wherein~~ including a vapor-deposited metal film having a reflectance of at least 30% ~~is formed~~ on an end surface of each of the light reflecting parts.

8. (Currently Amended) The semiconductor optical waveguide device according to Claim 7, wherein the metal film ~~for reflection~~ is made of aluminum.

9. (Currently Amended) A semiconductor optical waveguide device, comprising:
a semiconductor substrate;
a plurality of substantially S-shaped bent waveguides, ~~each formed in a shape of~~
waveguide being a ridge on the semiconductor substrate;
at least two optical waveguide returning parts ~~which are~~ interposed between an input end and an output end of the bent waveguides, each of said optical waveguide returning parts including a multiplexing portion; and
respective light reflecting parts ~~each formed~~ on a rear end side of said multiplexing ~~portion~~ portions of each of the optical waveguide returning parts, wherein each of the waveguides includes a core layer ~~formed~~ on an upper surface of the semiconductor substrate and a ~~clad~~ cladding layer ~~formed~~ on ~~said~~ the core layer.